

A set of well-filled book shelves; while the writing desk,
in Yorkshire having shows that the family will not
leave you a day or two at any rate. It often happens that
the father pays into a building society until the house
he lives in becomes his own.

Bradford has had a very interesting history. During
the Civil War (1642-1649), Bradford was on the side of
the Parliament. The Royalist garrison under the Earl of
Newcastle collected the town, when the parish church was
used as an hospital for the wounded, the women
hitting on the expedient of mending wool packs
wound the boulders to receive the shot of the enemy.
Yorkshire was, for the most part, on the King's side,
but the two Fairfaxes, Lord Fairfax & his son, Sir
Thomas, who belonged to an ardent Yorkshire
family, fought valiantly against the royal forces and
to command of the Earl of Newcastle. Sir Thomas
Fairfax has left an account of the actions in
which he & his father were engaged, containing
interesting particulars with regard to the towns of
Leeds & Bradford. How, for instance, "the Earl
of Newcastle needed not to raise batteries (about
Bradford), for the hills commanded all the town;"
how amongst the prisoners was "my wife; the
friend behind whom she rode being taken; how,
"my daughter, not being above five years old, being
carried by her maid, endured all this attack
on horseback." - (whom, to Selby, in Hull, &c. &c.)

I close to Bradford as almost - before part
of the town are the now famous ironworks, known all
over the world for the great strength & stoneness
of the iron goods produced in them - iron plates
bars, rails for railway lines - the best in
the world, which are sent to America, Egypt, India
Russia

242

Russia; whenever the stamped iron goods are wanted
to see Moss brand is known. By night the foundry
is to be seen from afar by the light of the huge blast
furnaces, blazing away like small volcanoes, &
reach the works, you cross a wilderness - of iron
circles 'islay', the refuse of the furnaces, which,
for nearly a century, has been collecting in
hillocks over the place. The peat-iron-works,
which employ some 4,000 men, rest upon the
north-west corner of the coalfield, where there is more
ironstone lying in seams, sometimes open
in the rock, sometimes several feet.

An interesting little township of Saltaws lies within
two miles of Bradford: everyone knows its history,
etc etc, related by Dickens. There a certain
Yorkshire manufacturer, with little money to spare,
sent his sons to Liverpool to buy wool, how, at the time,
was lay in the yards of a Liverpool merchant - many
odd little bales of "queer-looking stuff" which no one
would buy. People can turned it over, & left it
where it was, & the merchant - did not know what odds
with the "nesty stuff" which had been sent to him
from South America. Now, by a happy chance, the
young Yorkshirer turned into this merchant's
yard, pulled out a handful from the open corner of
a bale, "felt at it, smelt at it, did everything but
taste it," & carried away a sample in his pocket, -
but soon very soon string up every bale of the useless
stuff. At first, people heard of a new material,
called alpaca, a shiny, silky, cool stuff, most
pleasant for summerwear. This was the old alpaca
salt-hair made of the odd, looking dirty wool he had
picked up in that Liverpool yard. It was to soft fine
silky wool - brown white or black - of the alpaca, a beautiful
color

111 P B A 1834

The Wolds are almost - deserts of trees. The few miles of chalk wear - is pretty worn by the action
of the waves with clay & crevices & various caves.
The few streams of the Wolds are fed by intermittent
springs, like the levaunts (or laveants) of the south
Downs here, these are called "gypsies" (hard & dry). Flint
& chalk, italy or the minerals proper to the chalk.

Holderness which lies without the chalk escarpment
we have spoken of, starting from Flamborough Head
& Beverley upon severally to Hull, has also an
interesting geological history. It is covered
with boulder clay ^{hard & dark} ~~sooty & decomposed~~, full of fragments
of rock found ^{such as} in situ in Norway, Scotland &
northern England. Geologists are agreed that this
boulder clay marks what is called the Glacial
epoch; that the irregularities in the boulder clay
are due to the fact that northern England took
at three different periods, as completely under
an ice covering as is Greenland at the present
day. But the boulder clay is overlaid ^{in many places} by
alluvial deposits - peat - sand, &c., others are due
not merely to the ^{founding} ~~wave~~ of rivers, but to the
silting up of a part of water which originally
bordered the coast. Then, Humber River is the
only one still in existence as a shallow lake. Though
it is low Holderness is not - a level country, except
to the south, where now is a good deal of marsh land
reclaimed from the sea. The structural
history of this district is not - confined to rewash.
From Bridlington & Spurn head the land is
retreating before the sea at the rate of two yards
a year; but i.e., a strip some six feet wide is
carried away from the coast annually down

249

villages. Churches, gran. pts., have been carried away
bit-by-bit; & hamlets, once perhaps a considerable
part. This history of Nottingham landed has been
lost-totally, leaving no trace of its whereabouts
beyond a surmise that it - stood somewhere
near Spurn Point. Spurn Point itself, &
the Bents as the ridge is called which connects
it with the mainland, is more or less a sandbank,
but within the Point - new lands are being
laid down formed of the material which the
sea has just stripped from the coast before it,
with the mud brought down by the river. The
old mud-flats have laid down of great
interest as showing state. Land in the very
process of making.

117

up under glacial influences, & then, part & then
acting on the softer parts of the rock in the regen'd
boulders have produced these strange forms.

For about three centuries ago, a discovery was made
in Widderdale which drew people in great numbers,
but it was then a bleak common: above Knaresb.
sprang up, the oldest & still, the most fashionable
inland watering place of the north. In 1596, the first
Spa was discovered by one Sir William Sterley, who
had travelled much in Germany & was familiar
with the virtue of some continental Spas. Now there
w^t many such springs as now known, all more or
less bristled with iron or sulphur. The water
of the chalybeate springs are bracing; those of the
sulphur springs are valuable in numerous disorder
in cases of indigestion. Knaresb. has its pump-
room, promenade, gardens, &c., the usual attractions
of a watering place; but its greatest attraction is the
fine, pure moorland air it enjoys.

On the opposite bank of the Widdel, ~~sits~~ lies a
broad flat river, rises the ruined towers of
Knaresborough Castle, standing on a high cliff
overhanging the river, overlooking the town of
Moorborough which is now beautifully placed
near any town of Yorkshire excepting Richmond.
^{the author of} ~~the~~ ^{the} Duke of York, the murderer of Beaufort remained
in hiding for a year after the commission
of their crime: in the King's Chamber, Richard II.
was confined before he was taken to Pontefract.
A. during the Civil War the castle sustained
a siege from the Parliamentarian forces under Lliberton.
Knaresborough was one of the most important com.
markets in the county. The town of Gates, on the
bank of the Widdel, has a world interest, first,

In the dwelling of the holy hermit St. Whet, bottom even,
King John was constrained with horrors, & a late
& less pleasant history as to some of the murder
committed by Queen Eleanor.

Wharfedale.

Of the two fair little valleys which form the Learney of Heaven - the upper valley of the Aire, the Ribble, & the Wharfe - Wharfedale is by far the loveliest. It is the most secluded, too: In the railway and at Ilkley you may walk the highways for half a day in the upper valley without meeting a second passenger. Anglers, indeed, find their way up, stop at the village inns, in the river is famous for its trout. The general credit of Wharfedale suffers from the very fact that it contains Bolton Woods, as lovely a spot as there is in the country; but the shot of the upper valley is park-like; everywhere is a broad bottom of meadow pasture, finely sprinkled with trees - ash, oak, &c. & yew, for the most part. Through such the Wharfe winds between wooded banks, & here & there, the falls draw up to the river's brink, now on this side, now on that. But these forest patches cluster all along the bottom, creeping now & then into the ~~wall~~, the remains of a forest which once covered the shot upper valley, & in the clearings, or green stretches of high pasture; while, above, the lower falls, grow the dark pines of the grit moors. Below Ilkley, you come upon the inevitable mill chimney of the Wear Ridding, but, above that charming watering place,

a complete river-system, a main stream with many affluents discharging almost the whole area of the County into a single noble estuary. & all this, within the limits of Yorkshire itself. It would be easy to show that civilisation has followed the courses of the rivers, that in their valleys we find the great religious houses, the centres of medieval civilization, & in their valleys, or the great industrial centres of to-day. Now is this all. It is not too much to say that its rivers have made Yorkshire; that they have scooped out the habitable places of the earth, & then have spread them with alluvial soil, able to bear food for man & beast. This is true with limitation of the great central valley, no doubt there was low land here before the rivers began to flow—a well-plein, if not a valley: but of the beautiful dales of the West & North Ridings, we may believe that the rivers have carved them out as truly as that they have embellished them. Of these, as of other river valleys, the words of Huxley might receive; "that, in point of fact, the present rivers have gradually scooped out their own channels, & that our river valleys are mainly, as result of work performed by rains, rivers, similar agents of denudation."

Yorkshire people rejoice in the fact—that no English county presents greater varieties of pictorial land-scapes than their own. True 'picturineness' is common—the result of the juxtaposition of the three said with the soft slopes, & in Yorkshire, such juxtaposition is of continual occurrence: every town here stands about on a smiling valley; the bottom of the valley is broken up by a limestone scar, providing a general key. It is a case of what is bred in the bone must out in the flesh; the character of the landscape depends upon the nature of the surface rocks; the variety of the landscape, upon the fact that very various strata come to the surface. Therefore

it is impossible to get a lucid idea of the geography of Yorkshire without some knowledge of its geology; & it is only as we know something of the structure of its several rocks, & their behaviors under atmospheric influences, that we have any explanation to offer of the distinctive feature of Yorkshire - bell caves, caverns, cone, & scar.

Perhaps nowhere in the world is the geological history of regions more clearly marked than in Yorkshire. - First, in order of time, highest in elevation, we have the Western Moors, the Pennine Chain of the geographer, a more or less mountainous tract some ninety miles in length, with an average breadth of thirty miles. Here appear the patriarchs of Yorkshire rocks - the Silurian & Carboniferous Shales.

Then, stretching through nearly the whole length of the county, but with a breadth narrower than four or five miles, we have a band of Permian rocks.

Next succeeds the broad Vale of York, where the original rocks (of the Eries series) are covered with the deposits of the rivers - mud, peat, sand, silt, gravel, clay - but it is their striking character to the landscape, etc. whole plain is an alluvial valley.

Between the bands of distinctive strata have occupied the whole length of the county from north to south; but eastern Yorkshire did not appear all at one sudden. To same conditions, traverse the county from Redcar to Spurn Head, & you pass through four regions, with widely different landscapes, marking widely different geological conditions.

Now, following still the order of time, beginning at the north, we have first the North Eastern Moors, with vegetation not unlike that of the Western Moors,

though supported on rocks of far more recent origin. Going south we cross the Vale of Pickering, arid & sterile, its surface rock being boulders, clay of glacial origin. Next succeeds the chalk of the Wolds, & lastly, Holderness, consisting present deposits, the ultima of the series of the country.

Somewhat as the landscape. Therefore, the agricultural manufacturing industries of district connected with its geological formation, that Yorkshire may be roughly parcelled out into some six or seven series of landscapes corresponding with the geological division we have indicated.

In Silurian rocks, infinately the oldest - series since Yorkshire exhibits, appears in one two places only. You are surprised to come upon quarries of bluish-green slate in the neighbourhood of Filey, & again, to the north of Selby, the same hard rock appears.

The Mountain - or Carboniferous - Limestone forms a district of singular beauty - peculiar character in the north-west of the county. The Selsley, Rye, Wharfe, Aire & Ribble have all cut much of this upper valley out of the solid limestone, their upper courses give opportunity to study the characteristics of limestone country. Upper Wharfedale, from below is, perhaps, the most beautiful & the most characteristic of these valleys. Like the Tees.

The Wharfe is -

"Condemned to run a channell'd way
Through the cold drifts of marble grey," -
& the clear brown waters, (brown from the peat-moss when they rise) course through a clean swept channel paved with grey slabs. Every now & then, boulders break the current - bring the waters into play, then, too pale hue of the rock is set off by dark drapings of the rich brown. Alders hang over the stream, a little higher, are hazel thickets with birch, rowan; & in the woods sheltering the limestone hills above, the cold grey-green of the ash is the prevailing tint. A special feature of the limestone country is the lovely lawn-like meadows sparsely which fill the lower valleys, for it is the property of the limestone to bear a close, short, vividly green turf. The flowers are very abundant - slender - the handsome purple red geranium, meadow campion, rock cress, several species of forget-me-yellow pansy, primrose. The beauty variety of the mosses, lichens, ferns, is another feature of the limestone country you may find even in natural ferneries between the limestone slabs.

cliffs on many a hill-top. the limestone poly-poly, & green spleenwort, the black maiden hair spleenwort, the scale fern, the common harts tongue, in fact all the ferns proper to the limestone, very abundant & beautiful, serving plant perfect edelheit in an as if reared under glass.

The great thickness of limestone which overlies this part of Yorkshire is not to be thought of as one solid rock: on the contrary, it consists of an infinite number of layers of varying hardness; here, a rock close & solid as marble, underlying another of loose caulk texture. Snow, rain & dew, snow & hail, atmosphere moisture in whatever form, is laden with carbonic acid, derived from the air itself, or from decaying vegetable matter: & water containing carbonic acid in solution has the property of actually dissolving the limestone - not merely wearing it away. How the carbonic acid acts is open to discussion; but the fact remains, & does much to account for the scars, the caves, the potholes, the underground streams, the fantastic rock forms of this district. Add to this, the common effect of weathering upon rocks of unequal hardness brought front; how the water percolates the softer, looser, shale, freezes, thaws, swells, bursts the rock that holds it as it might burst a pebble, leaves a piece exposed to the further action of the atmosphere, this is for ever wearing away, as well as dissolving, the yielding limestone more &

This is the history of the fine scars, which stand like so many fortresses up & down the Wharfe valley. Dipping water has ground its way through the loose joints; carbonic acid in solution has eaten out a way through denser layers, debris, broken off by no man's hand as the other, has fallen to the base of the cliff, until now it stands, a rounded bare face of limestone, with harder layers standing out like courses of heavy masonry, steep as the walls of a castle.